

What is claimed is:

1. Apparatus for protecting a compressor within a heating, cooling, ventilating or refrigeration system wherein the compressor includes housing for the oil used to lubricate moving parts of the compressor, said apparatus comprising:  
a heat regenerative unit containing material that absorbs heat from the oil when the oil is lubricating moving parts of the compressor in an operational state, said material transferring the absorbed heat back to the oil when the compressor is no longer in an operational state whereby the oil is maintained at a temperature level sufficient to avoid damage to moving parts of the compressor.
2. The apparatus of claim 1 wherein portions of the heat regenerative unit are in contact with the exterior of the housing for the oil used to lubricate moving parts of the compressor.
3. The apparatus of claim 2 wherein the portions of the heat regenerative unit not in contact with the housing for the oil are insulated.
4. The apparatus of claim 3 wherein the portions of the heat regenerative unit in contact with the exterior of the housing for the oil are in contact with at least three sides of the exterior of the housing.
5. The apparatus of claim 1 wherein the heat regenerative unit is located within the housing for the oil used to lubricate the moving parts of the compressor.
6. The apparatus of claim 5 wherein said heat regenerative unit is located above the bottom interior surface of the housing for the oil used to lubricate the moving parts of the compressor.
7. The apparatus of claim 1 wherein the material that absorbs heat from the oil and transfers the absorbed heat back to the oil is a thermal phase change material having a melting point above a minimum desired temperature for the oil when the

compressor is no longer in an operational state.

8. The apparatus of claim 7 wherein the amount of thermal phase change material is dependent on the maximum anticipated time that the compressor will not be in an operational state.
9. The apparatus of claim 1 wherein material that absorbs the heat from the oil and transfers the heat back to the oil is a hydrated salt capable of maintaining the temperature of the oil above a point needed to boil off any refrigerant in the oil.
10. The apparatus of claim 1 wherein the heat regenerative unit is fabricated from aluminum.
11. The apparatus of claim 1 wherein the heat regenerative unit is fabricated from a plastic that may be molded into a shape for maximizing contact with the exterior of the housing for the oil.